

Check Your Understanding

1. **Number Sense** Which product is larger, 3×3 or $3 \times 3\frac{1}{2}$? Justify your answer.

Change each mixed number to an improper fraction.

2. $1\frac{2}{5}$

3. $3\frac{1}{3}$

4. $2\frac{2}{3}$

Find each product.

5. $\frac{2}{3} \cdot \frac{3}{4}$

6. $2\frac{1}{2} \times 1\frac{2}{3}$

7. $2\frac{1}{2} \cdot 1\frac{1}{4}$

Homework Exercises

For more exercises, see Extra Skills and Word Problems.

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For Exercises	See Examples
8–14	1
15–21	2–3

Estimate each product.

8. $3\frac{1}{2} \cdot 1\frac{1}{4}$

9. $14\frac{2}{3} \cdot 5\frac{1}{3}$

10. $5\frac{1}{2} \cdot 10\frac{3}{10}$

11. $7\frac{3}{4} \times 9\frac{1}{2}$

12. $15\frac{9}{10} \cdot 3\frac{1}{5}$

13. $2\frac{3}{4} \times 6\frac{1}{8}$

14. Andrew earns \$6.25 per hour. He works $4\frac{1}{2}$ hours per day, 5 days per week. Estimate how much money he earns per week.

Find each product.

15. $7\frac{1}{2} \cdot 8\frac{2}{3}$

16. $5\frac{1}{3} \times 2\frac{1}{4}$

17. $3\frac{1}{9} \cdot 3\frac{3}{8}$

18. $2\frac{4}{5} \times 12\frac{1}{2}$

19. $1\frac{1}{3} \cdot 10\frac{1}{2}$

20. $3\frac{1}{5} \cdot 1\frac{7}{8}$

21. **Sewing** A quilt pattern has squares with $7\frac{1}{2}$ -inch sides. You want to make squares that are $\frac{2}{3}$ of the pattern's size. Find the new dimensions of a square.

GPS

22. **Guided Problem Solving** A carpenter needs six pieces of wood $3\frac{1}{2}$ feet long. The carpenter has two 10-foot boards. Does the carpenter have enough wood? Explain.

- What is the total length of wood needed?
- What is the total length of wood the carpenter has?

23. **Track and Field** A women's long-jump record is about $1\frac{1}{6}$ the distance of the 15–16-year-old girls' record of $20\frac{13}{24}$ feet. Find the distance of the women's record to the nearest foot.

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Algebra Evaluate each expression for $x = 5\frac{1}{3}$.

24. $9x$ 25. $2\frac{5}{8} \cdot x$ 26. $3x + 2$ 27. $7\frac{1}{2}x + 5$
28. a. A mother is $1\frac{3}{8}$ times as tall as her daughter. The girl is $1\frac{1}{3}$ times as tall as her brother. The mother is how many times as tall as her son?
b. If the son is 3 feet tall, how tall is his mother?
29. **Design** A painting is $1\frac{3}{4}$ feet by $1\frac{5}{8}$ feet. What size will a copy of the painting be if its length and width are $1\frac{1}{3}$ the size of the original?
30. You earn \$7.25 per hour. You work $4\frac{1}{2}$ hours each day for 3 days each week. How much money do you earn in two weeks?
31. **Writing in Math** Describe some items with lengths and widths that are mixed numbers.
32. **Challenge** Find $(2\frac{1}{3}) \cdot (1\frac{1}{2})^2$.



Test Prep and Mixed Review

Practice

Multiple Choice

33. Which measurement is closest to $\frac{1}{2}$ inch?
 Ⓐ $\frac{1}{4}$ inch Ⓑ $\frac{5}{16}$ inch Ⓒ $\frac{5}{8}$ inch Ⓓ $\frac{3}{4}$ inch
34. The length of a credit card is $3\frac{3}{8}$ inches. Its width is $2\frac{1}{8}$ inches. Which expression shows how much greater the length of the card is than the width?
 Ⓕ $3\frac{3}{8} - 2\frac{1}{8}$ Ⓖ $3\frac{3}{8} + 2\frac{1}{8}$
 Ⓖ $3\frac{1}{8} - 2\frac{3}{8}$ Ⓙ $3\frac{1}{8} + 2\frac{3}{8}$
35. Gerry wants to find a number between 90 and 100 that is divisible by 3 and 4. He chooses 92. Why is Gerry's answer incorrect?
 Ⓐ 92 is a prime number.
 Ⓑ 92 is not divisible by 3.
 Ⓒ 92 is divisible by 3 and 4.
 Ⓓ 92 is not divisible by 4.

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For Exercises	See Lesson
36–38	5-4

Find each sum.

36. $3\frac{2}{5} + 4\frac{1}{5}$ 37. $2\frac{1}{6} + 1\frac{5}{6}$ 38. $5\frac{3}{8} + 2\frac{1}{4}$